Abstract

Waterborne coating compositions, methods of applying such compositions, and substrates coated with such compositions are described. The compositions include an aqueous dispersion of a polyurethane resin, an epoxy resin, and a polyvinyl chloride resin. The compositions can also include an aminoplast such as a melamine, and one or more curing agents. Additionally, the compositions can include flatting agents, colored metallic and/or polymeric particles, hard particles, surfactants, rheology modifiers, defoamers, and coalescing aids. The coating composition can be applied to virtually any surface and cured using conventional heat curing techniques, whether or not there is a chemically embossed layer. However, it is advantageously used in surface coverings in combination with a chemically embossed layer. In one embodiment, the surface covering includes a chemically embossed layer and a cured top layer, which are both cured in a single heating step or plurality of heating steps. Ideally, the top layer has good wear and stain resistance properties, and the chemical embossing in the foamable layer occurs while the top layer is cured. However, the coating composition can be applied to a surface covering that does not include a chemically embossed layer. Optionally, one or more of the above-layers is mechanically embossed.